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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/820,688	03/30/2001	Koji Naito	018987-032	8787
7590 Platon N. Mandros BURNS, DOANE, SWECKER & MATHIS, L.L.P. P.O. Box 1404 Alexandria, VA 22313-1404		EXAMINER THOMPSON, JAMES A		
		ART UNIT 2625		PAPER NUMBER
		MAIL DATE 12/27/2007		DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/820,688	NAITO ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	James A. Thompson	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 October 2007 and 21 November 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) \_\_\_\_\_ is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-7, 9-13, 15-20 and 22-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

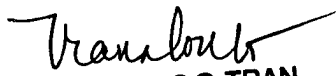
**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

  
**DOUGLAS Q. TRAN**  
**PRIMARY EXAMINER**

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/21/07</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed 12 October 2007 have been fully considered but they are not persuasive.

#### **Regarding page 2, line 10 to page 4, line 3:**

*Applicant argues* that Evans (USPN 6,577,746 B1) does not teach that the watermark includes storage information concerning the location of the watermark, but rather teaches that the location information concerns the location (such as size, rotation, etc.) where the imported image is to be inserted into the image.

*Examiner replies* that, firstly, the independent claims do not recite that the watermark itself includes storage information concerning the location of the watermark. Rather, the independent claims recite that the storage unit "stores the detected pieces of additional information in association with location information thereof." The additional information is stored *in association* with the location information. The independent claims do not recite that the additional information *includes* the location information. Although the language of the independent claims leaves open the possibility that the additional information may include the location information, this is not at all required. All that is required is that the additional information be stored in association with the location information. Thus, the location information could be obtained separately and be stored in associated manner with respect to the additional information.

Further, the cited portion of Evans states that "the photocopier's watermark detector also discerns the placement of the watermarked picture within the document image *and* its state (e.g., size, rotation, etc.)" [emphasis added]. See column 2, lines 62-65 of Evans. Thus, the location of the watermark is part of the data that is stored in association with the watermark data.

#### **Regarding page 4, line 4 to page 5, line 5:**

*Applicant argues* that Evans does not teach that the additional information (watermark) is updated, but rather teaches that the composite image is updated with the latest version of the retrieved image.

*Examiner replies* that the cited portions of Evans unambiguously show that the watermark is updated, and not the composite image. Evans states "in applications where it is appropriate for a picture to be updated with the latest version whenever printed, the *watermarking* of the picture 38 permits

substitution of a latest version whenever the document is scanned for printing" [emphasis added]. See column 3, lines 47-52 of Evans. Thus, it is the watermark that is updated. While the picture may also be updated to a more recent version, this does not alter the fact that the watermark in and of itself is updated. Further, Evans also demonstrates that the watermark can be updated, whether or not the "pristine picture" is updated. See column 3, lines 29-33 of Evans. Thus, Evans does teach that the additional information is updated.

**Regarding page 5, lines 6-24:**

*Applicant argues* that Ikenoue (USPN 5,987,127) does not teach that information concerning the location of the extracted information from the inputted image data is extracted and stored when extracting additional information from the inputted image data. Applicant alleged instead that Ikenoue teaches that a search is newly performed for a location having a density level that enables the additional data to be embedded, without considering the original location in which the extracted additional information was embedded.

*Examiner replies* that Ikenoue has been relied upon to teach "embedding a new piece of additional information including updated information into the first image data at a location that does not overlap locations where the detected pieces of additional information are embedded," which is taught in figure 2(1<sup>st</sup> Generation) and column 6, lines 33-47 of Ikenoue. For each new generation copy code, which is embedded as a watermark, new information is added where there is no information when each generation of a copy is made. The new piece of additional information does not overlap location where the detected pieces of additional information are embedded because the new piece of additional information must be in new location since the older generation codes already exist at their respective locations. The portion cited by Applicant (column 8, line 52 to column 9, line 3 of Ikenoue) does not alter this depiction of Ikenoue. The portion cited by Applicant merely demonstrates that the additional information must be embedded where the density of the image changes little. This does not alter the fact that new additional information is embedded so as not to overlap with previously embedded additional information.

**Regarding page 6, lines 1-13:**

*Applicant argues* that Examiner, in a prior office action, stated that Ikenoue does not teach certain elements of the recited claims.

*Examiner replies* that Examiner has not relied upon Ikenoue to teach any of the elements referred to in the first paragraph of page 6 of Applicant's arguments.

**Regarding page 6, lines 14-20:**

*Applicant argues* that the dependent claims are allowable at least owing to their respective dependencies.

*Examiner replies* that, since the independent claims have been shown to be rendered obvious over the prior art, the dependent claims cannot be deemed allowable merely due to their respective dependencies.

**Regarding page 7:**

Examiner maintains the prior art rejections set forth in the office action mailed 06 August 2007 and repeats those prior art rejections below. Accordingly, the present action is made final.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1, 3, 5-7, 9, 11-13, 15, 17-20, 22 and 24-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Evans (US Patent 6,577,746 B1) in view of Ikenoue (US Patent 5,987,127).**

**Regarding claims 1, 7, 13, 19, 20, 26, 27 and 28:** Evans discloses an image forming apparatus (figure 1 of Evans) equipped with an image processing apparatus (figure 1 of Evans) that processes inputted first image data so as to output second image data, the image forming apparatus forming an image according to the second image data (column 3, lines 13-28 of Evans), the image processing apparatus comprising: a detecting unit (figure 1(18) of Evans) that detects all pieces of additional

information (pristine picture, watermark and watermark ID data) that are embedded in the first image data (column 2, lines 12-14 of Evans); a storage unit (figure 1(16) of Evans – *or other inherently present computer memory needed to store information for processing (see column 4, lines 20-24 of Evans)*) that stores the detected pieces of additional information in association with location information thereof (column 2, lines 25-30 and lines 61-65 of Evans); an analyzing unit (figure 1(20(portion)) of Evans – *embodied software stored in computer-readable memory and executed by the processor, which performs corresponding analyzing functions*) that analyzes the detected pieces of additional information and judges whether any of the detected pieces of additional information includes predetermined information that is updatable (column 3, lines 29-33 and lines 47-51 of Evans – *if watermark detected in document, and there is a newer version of the watermark at the server, watermarked image is updated*); and an embedding unit (figure 1(20(portion)) of Evans – *embodied software stored in computer-readable memory and executed by the processor, which performs corresponding embedding functions*) that (1) updates, when a judgment result of the analyzing unit is affirmative, the predetermined information included in the piece of additional information (column 3, lines 29-33 and lines 47-51 of Evans – *if watermark detected in document, and there is a newer version of the watermark at the server, watermarked image is updated*), and embeds the piece of additional information including the updated predetermined information into the first image data at a location where the piece of additional information is originally embedded, by referring to the stored location information (figure 1(30,30'); column 2, lines 61-65; and column 3, lines 14-20 of Evans), wherein the first image data embedded with the predetermined information and/or the new piece of additional information is outputted as the second image data (column 3, lines 23-28 of Evans).

Evans does not disclose expressly that said embedding unit (2) embeds, when a judgment result of the analyzing unit is negative, a new piece of additional information including updated information into the first image data at a location that does not overlap locations where the detected pieces of additional information are embedded, by referring to the stored location information, the updated information being equivalent to the predetermined information.

Ikenoue discloses embedding a new piece of additional information including updated information into the first image data at a location that does not overlap locations where the detected pieces of additional information are embedded (figure 2(1<sup>st</sup> Generation) and column 6, lines 33-47 of Ikenoue – *new information added where there is no information for each new generation copy code when each generation of a copy is made; must be in new location since older generation codes already exist at their respective locations, or there is no copy code if copy is first generation*). Since both the updated

information taught by Ikenoue and the predetermined information taught by Evans are watermarks containing particular information, the updated information taught by Ikenoue is equivalent to the predetermined information taught by Evans.

Evans and Ikenoue are combinable because they are from the same field of endeavor, namely the detection and updating of watermark data in document copying. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to add any necessary predetermined information at locations where is not presently any additional information, as taught by Ikenoue. The motivation for doing so would have been to be able to manage the number of copies generated and prevent illegal copying, through the use of updated generational watermark data (column 2, lines 23-32 of Ikenoue). The predetermined information in Ikenoue is not updatable and Evans cites some conditions in which updating information at the location of the watermark would be undesirable (column 2, lines 48-53; and column 3, lines 29-30 and lines 52-57 of Evans). Therefore, it would have been obvious to combine Ikenoue with Evans to obtain the invention as specified in claims 1, 7, 13, 19, 20, 26, 27 and 28.

Further regarding claim 1: The apparatus of claim 1 is fully embodied in the apparatus of claim 7.

Further regarding claim 13: The apparatus of claim 7 performs the method recited in claim 13.

Further regarding claim 19: The apparatus of claim 7 performs the method recited in claim 19.

Further regarding claim 20: The apparatus of claim 7 executes the steps of the computer program recited in claim 20.

Further regarding claim 26: The apparatus of claim 26 is fully embodied in the apparatus of claim 1.

Further regarding claim 27: The method of claim 27 is fully embodied in the method of claim 13.

Further regarding claim 28: The computer-readable medium containing a program of claim 28 is embodied in the computer-readable medium containing a program of claim 20.

**Regarding claims 3, 9, 15 and 22:** Evans discloses that when the analyzing unit analyzes the detected pieces of additional information, the analyzing unit employs a predetermined embedding format used by the embedding unit (column 2, lines 36-39 and lines 47-53 of Evans – *watermark and watermark ID in set format embedded in image of particular format*).

**Further regarding claims 5, 11, 17 and 24:** Ikenoue discloses that, when the analyzing unit finds that any of the detected pieces of additional information is unanalyzable (column 13, lines 60-66 of Ikenoue), the analyzing unit judges that the piece of additional information does not include the

predetermined information (column 14, lines 4-8 of Ikenoue). Blocks of additional data are analyzed to determine whether or not said blocks of additional data are invalid (column 13, lines 60-66 of Ikenoue). If said block of additional data are invalid, but said invalidity is not due to forgery, said invalid blocks are deleted (column 14, lines 4-8 of Ikenoue). Thus, said invalid blocks clearly do not have said predetermined information.

**Further regarding claims 6, 12, 18 and 25:** Ikenoue discloses that the predetermined information includes information about a date when the image data is processed (column 16, lines 21-22 and lines 33-34 of Ikenoue).

**4. Claims 4, 10, 16 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Evans (US Patent 6,577,746 B1) in view of Ikenoue (US Patent 5,987,127) and Davis (US Patent 3,760,159).**

**Further regarding claims 4, 10, 16 and 23:** Ikenoue discloses a warning unit (figure 13(20) of Ikenoue) that issues, when the additional data is determined to be secret (column 19, lines 60-65 of Ikenoue) and the proper confirmation data is not entered (column 20, lines 3-4 of Ikenoue), a warning to the effect that the copying of the document would be illegal (column 20, lines 5-9 of Ikenoue).

Ikenoue further discloses using the analyzing unit to find if any of the detected pieces of additional information are unanalyzable (column 13, lines 60-66 of Ikenoue).

Evans in view of Ikenoue does not disclose expressly that said warning unit issues, when the analyzing unit finds that any of the detected pieces of additional data is unanalyzable, a warning to the effect that the piece of additional information is unanalyzable.

Davis discloses issuing a warning to the effect that a valid parity does not exist (column 6, lines 16-20 of Davis) in the digital input data (column 5, lines 64-68 of Davis).

Evans in view of Ikenoue is combinable with Davis because they are from similar problem solving areas, namely the verification of digital information. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to display a warning if the digital data cannot be read properly, as taught by Davis, and is therefore unanalyzable, as taught by Ikenoue. The motivation for doing so would have been to give the operator a visual notification that an error has occurred (column 6, lines 19-20 of Davis). Therefore, it would have been obvious to combine Davis with Evans in view of Ikenoue to obtain the invention as specified in claims 4, 10, 16 and 23.

*Conclusion*

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Thompson whose telephone number is 571-272-7441. The examiner can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

James A. Thompson  
Examiner  
Technology Division 2625

/JAT/  
20 December 2007

DOUGLAS Q. TRAN  
PRIMARY EXAMINER

